Abstract 2240

GEMSTONE-302: a Phase 3 Study of Platinum-Based Chemotherapy (chemo) with Placebo or CS1001, an Anti-PD-L1 Antibody, for First-Line (1L) Advanced Non-Small Cell Lung Cancer (NSCLC)

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Background

CS1001, a full-length, fully human PD-L1 targeted IgG4 (s228p) mAb, was well tolerated and had demonstrated promising anti-tumor activities across a range of cancers including NSCLC in phase Ia/Ib study. GEMSTONE-302 is a randomized, double-blind, phase 3 study to compare the efficacy and safety of chemo with or without CS1001 as 1L treatment for advanced NSCLC.

Methods

Eligible pts with untreated advanced NSCLC were stratified by histology (sq vs nsq), PD-L1 expression (≥1% vs <1%), and ECOG PS (0 vs 1) and randomized 2:1 to receive CS1001 (1200 mg, Q3W, IV)/placebo + chemo up to 4 cycles, followed by CS1001 or placebo maintenance up to 2 yrs. In nsq pts, pemetrexed was also given as maintenance therapy. The primary endpoint is investigator-assessed PFS (RECISIT v1.1).

Results

A total of 479 pts (320 in CS1001+chemo, 159 in placebo+chemo) were enrolled in the study. Baseline characteristics were balanced between 2 arms. As of 8 Jun 2020, at the pre-planned PFS interim analysis (median follow-up 8.67 vs 8.34 mo), the mPFS was significantly prolonged in the CS1001+chemo arm (stratified HR 0.50 [0.39-0.64], p<0.0001; mPFS, 7.8 vs 4.9 mo). ORR was 61.4% and 39.2% in CS1001+chemo and placebo+chemo arms, respectively. OS data was immature, but a clinical benefit trend was observed, (stratified HR 0.66 [0.44-0.97], mOS, NR vs 14.75 mo). Subgroup analyses demonstrated clinical benefits across histology and PD-L1 expression levels. Grade ≥3 TEAEs were reported in 61.9% and 61.6% of pts in CS1001+chemo and placebo+chemo arms, respectively. The 2 arms had similar safety profile, with the exception of mostly grade 1 and 2 immune-related AEs in the CS1001+chemo arm. No new unexpected safety signals were found.

Conclusions

This is the first phase 3 trial conducted in China on an anti-PD-L1 mAb plus chemo that enrolls advanced, treatment-naive sq and nsq NSCLC pts. CS1001 combined with chemo shows statistically significant and clinically meaningful benefit in PFS with a well-tolerated safety profile against chemo across histology and PD-L1 expression levels. It will potentially become a new SOC for 1L treatment of advanced NSCLC once receiving

regulatory approval.

Clinical trial identification

NCT03789604

Editorial acknowledgement

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